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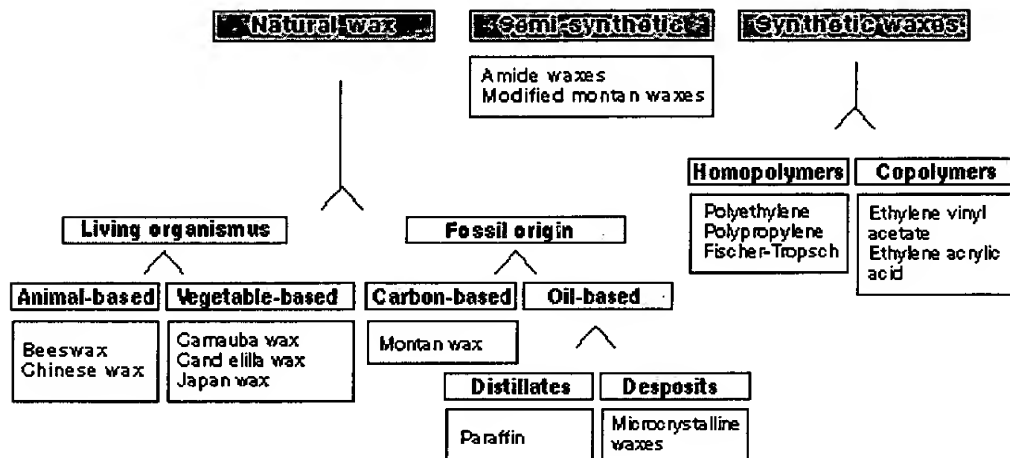
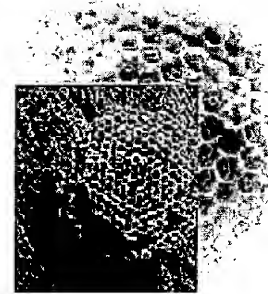
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A little bit of "waxology" ...



In the past most people originally understood the term **wax to relate only to beeswax**. In those days it was still possible to give an unique answer, in a chemical sense, to the question "what is a wax?". Since fossil products such as paraffin wax and montan wax appeared later, a chemical definition became impossible. The chemical composition alone does not determine what a wax is. Rather, wax is a technological umbrella concept for materials that behave like waxes, i.e., which have:

- a melting point of at least 40°C (as opposed to fats and oils)
- a relatively low melt viscosity, non-stringing, but producing droplets (unlike most resins and plastics)
- no chemical decomposition at higher temperatures (which distinguishes them from natural resins).



Excellen e in wax

XI 1



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One of our basic aims: close contact with customers worldwide!



BYK Cera is a worldwide company. This is reflected in our many regional branches and offices. We are ready to assist you and your company in all matters relating to wax technology. We have a large staff of experts in wax technology and application. We are also a member of the International Association of Wax Producers (IAWP).

BYK-Cera - excellence in wax

BYK-Cera has acquired over 25 years of experience and competence in the development of wax additives for the paints and printing inks industry. A customer orientated approach is the thread that runs through our operations - all the way from the development of innovative products up to prompt delivery.

ISO 9001

Privat - toll manufacturing at the highest level

As a special service, we are glad to place at your disposal our capacities and capabilities to manufacture your own waxes. With guaranteed confidentiality we manufacture your product to the highest levels of quality to your own formula. For the customer, this means a service that ensures reduced investment costs, greater flexibility and guaranteed reproducibility by our expertise in the field of wax.

The advantage for you is our flexibility

Our selection of waxes that includes the majority of all the waxes available worldwide can be supplied by us on demand. They are stored according to their properties and characteristics in large quantities so that they can be used quickly and flexibly as components for your products. This system means that sometimes we are even in a position to make the impossible possible for you.

Product development and application technology

Our activities concentrate on the processing of hard waxes in wax dispersions and emulsions and in the form of micronized waxes.

The goal set within the development of new products is to provide suitable solutions for the market. Our product palette is constantly being optimized.

In order to be able to offer tailor made solutions to all of our customers, it is desirable to have close collaboration between their R&D laboratories and our own. In this way products are either redesigned or else designed from scratch.

BYK-Cera and BYK-Chemie

The company BYK-Cera has its origin in CERA Chemie b.v., which was founded in 1972.

In 1991 BYK-Cera became a subsidiary of BYK-Chemie. This laid the foundation stone for an alliance which guarantees a well-rounded range of products and services as well as joint operations in markets worldwide.

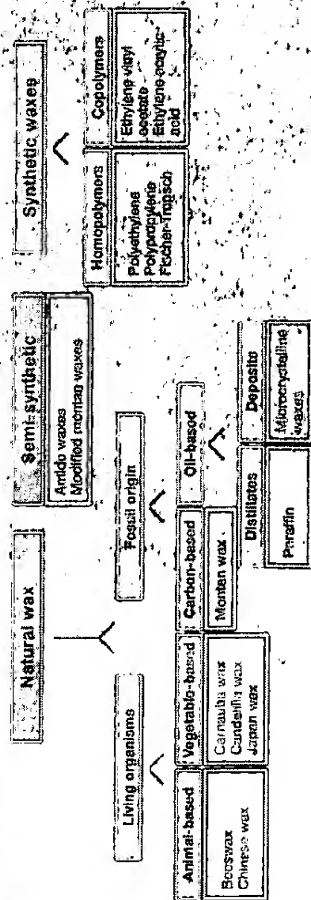
Customer orientated product development, application technology-related testing and production are all backed up by ISO 9001 certification.

A little bit of "waxology"...

What people ordinarily understood by the term wax was only beeswax. In those days it was still possible to interpret the question "what is wax?" in its chemical sense.

Since fossil products such as paraffin wax and montan wax appeared later, a chemical distinction became impossible. The chemical composition alone does not determine what a wax is. Rather, it is a technological term: a concept of "waxes" that began like waxes, i.e., with their

- a melting point of at least 40°C
- a low viscosity (as and oils)
- a relatively low bulk viscosity, non-stinging, low flammability (unlike most resins)
- no chemical decomposition at higher temperatures (which distinguishes them from natural resins).



We make waxes usable

Many different capabilities lie hidden within waxes of exactly the same origin. At BYK-Cera we have applied ourselves to this matter since 1972, and the results of our endeavours are there for all to see.

Two major properties set the standard for the importance of wax additives: surface protection and rheological effect.

Wax additives for surface protection

On the one hand, we know the performance capabilities of waxes, and what is much more important, we know how to make these capabilities usable.

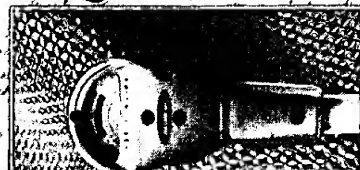
If you consider that nowadays nearly all consumer goods contain waxes, you will get an idea of the relevance of our business.

Further processing as a prerequisite

Today's applications for waxes place a premium on semi-synthetic and synthetic waxes. The ability to make chemical modifications puts us in the position to directly influence the properties of the wax. This further processing primarily involves emulsification, dispersion, precipitation and also micronization. An extremely wide variety of wax additives is produced as a result.

Waxes for rheological control

A wax-dispersant also has the property of affecting the rheology of a paint system. It would not be possible to have metallic paints if wax dispersions did not take care of the required orientation of the aluminum particles. Wax dispersions also have the useful property of stabilizing spates, and this prevents settling out and sedimentation with our products.



Our waxes play a major role in the most various areas in daily life. Whether in paints and varnishes for furniture and wood goods of all types, forcing paints to paint for bicycles, computers or "white goods", or as a metallic base paint for the auto industry - wax additives from BYK-Cera are made for successful results.

**Clos attention and careful monitoring
from the very start:**

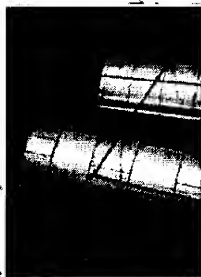
For us, development
and applications tech-
nology go hand in hand.



Our quality control
guarantees products
of consistent quality at
the highest level.



Privacy means: contract
production perfectly
matched to the customer's
requirements.



Modern logistics
form the basis of
our deliveries.



Ideal conditions for storage
with over 5,000 square
metres of warehouse.



**Reliable production and
prompt deliveries.**

A product palette that leaves nothing to be desired!

With BYK-Cera wax additives you have all the solutions known to science in your hands. We are proud to be able to help you in so many different ways today - and we are working hard on the tasks still unsolved.

field of aqueous paint systems. Thanks to a particle size of < 0.3 µm, Aquacer wax emulsion is the right choice for high-gloss paint systems. Aquamat products find a ready application in everything from silk-finish to matted systems.

We offer solutions for the most varied requirements.

The multiplicity of application areas and the wide variety of paint systems on the market mean that extremely varied demands are made on wax additives. Our product ranges have been developed over many years in response to these demands.

Wax additives in aqueous systems

Aquacer aqueous emulsions and Aquamat wax dispersions are the two product groups by which BYK-Cera covers the

Wax additives for solvent-based systems

Ceratak, Ceramat and Ceratix are wax dispersions whose particle sizes are considerably larger than those of Aquacer wax emulsions. This circumstance influences the glossiness of the paint system.

A further advantage of these wax dispersions lies in the fact that they affect the rheology of the paint system.

Ceracool wax dispersions are used in surface protection for can and coil-coating paints as well as for flexo- and gravure printing inks.

Cerafour is a range of 100% powder-type wax additives with a very high degree of fineness. Since they contain no solvent, they have universal application. Minerpol wax dispersions are paste-type additives to improve wet abrasion resistance in offset-printing inks.

Our product explanatory brochure G2 gives comprehensive information on the composition, characteristics, areas of application and properties of our products.

BYK-Cera Wax Additives	
• Aquacer wax emulsions	Primarily in water
• Aquamat wax dispersions	Primarily in water
• Ceratak wax dispersions	Primarily in non-polar solvents
• Ceratix wax dispersions	Primarily in non-polar solvents
• Ceramat wax dispersions	Primarily in non-polar solvents
• Ceracool wax dispersions	Primarily in polar solvents
• Cerafour - micronized waxes	Solvent-free
• Minerpol wax pastes	Primarily in mineral oil and binders

